

## Hemlock woolly adelgid

### *Adelges tsugae*

#### Description

First described in western North American in 1924 and first reported in 1951 near Richmond, VA. It is a true bug native to East Asia.

#### Identification

Small, less than 1/16 in (1.5 mm) long and varies from dark reddish-brown to a purplish-black color. As it matures, it produces a covering of wool-like wax filaments to protect itself. They are parthenogenic, meaning all individuals are female.

#### Habitat

Native to Japan and China; Eastern hemlocks and Carolina hemlocks are most vulnerable. They can develop on all species of hemlock trees.



## **Reproduction**

Life cycle includes six stages of development: egg, four nymphal instars, and adult. They completes two generations a year on hemlock. The winter generation, the sistens, develops from early summer to midspring of the following year (June through March). The spring generation, the progrediens, develops from spring to early summer (March through June). The generations overlap in mid to late spring.

## **Impact**

Heavy infestations can kill a tree within four to ten years; trees are also weakened and made vulnerable to attack by other insects and diseases.

## **Similar**

Balsam woolly adelgid (*Adelges piceae*).

## **Monitoring and Rapid Response**

Move bird feeders away from hemlocks to prevent spreading. Remove isolated infested trees from woodlot. Foliar sprays using horticultural oils (February or early March before egg laying occurs) and insecticidal soaps.

## **Credits**

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